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	Name **姓名**	**Title** **职务**	**Signature** **签名**	**Date** **日期**
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RIGS 研究创新和研究生部	√	U.G. Dept. 本科教学部	√	I.T.Dept. 电脑信息部	√

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1. Purpose 目的

In order to strengthen the supervision and management of the safety and protection of radioisotopes and radiation devices in schools (hereinafter referred to as "radiation safety management"), to ensure the health and safety of radiation workers, to ensure the smooth progress of teaching and scientific research, and to protect the environment, according to relevant national laws And regulations, in accordance with the specific circumstances of our school, formulate these rules.

为加强校内放射性同位素与射线装置安全和防护的监督管理(以下简称“辐射安全管理”)，保障从事放射工作人员的健康与安全，保证教学、科研等工作顺利进行，保护环境，根据国家相关法律、法规，结合我校具体情况，制定本细则。

2. Scope 范围

The provisions of this document apply to the supervision and management of the safety and protection of all personnel involved in radioactive isotopes and radiation installations, teaching and research related places, and related activities at Guangdong Israel Institute of Technology.

本文件规定适用于广东以色列理工学院所有涉及放射性同位素与射线装置的人员和教学、科研等相关场所以及相关活动安全和防护的监督与管理。

3. Responsibilities 职责

EHS Office EHS办公室：

- Responsible for safety training on radiation equipment in schools;
  负责校内关于辐射设备的安全培训；
- Assist the use department and asset management department to complete the application for registration of special equipment;
  协助使用部门和资产管理部门完成特种设备使用登记申请；
- Assist the medical examination guidance of the radiation equipment users in the school;
  协助校内辐射设备使用人员的体检指导工作；

- Supervise the effective implementation of daily safety management of radiation equipment.
  监督辐射设备的日常安全管理工作的有效落实。

Operation Department Asset Management Department 运营部资产管理部门：

- Responsible for regular internal and external legal inspections of radiation equipment in schools;
  负责校内辐射设备的内部和外部法定定期检查工作；
- Responsible for the daily management and maintenance of radioisotope and radiation device technology on campus.
  负责校内放射性同位素与射线装置技术日常管理和维护工作。

Lab Manager for those using radiation equipment 使用辐射设备的实验室负责人：

- Responsible for safety management in the laboratory;
  负责实验室内安全管理工作；
- Responsible for radiation safety training of laboratory personnel;
  负责实验室内人员的辐射安全培训；
- Responsible for the design and maintenance of the safety facilities of the radiation equipment in the laboratory;
  负责实验室内辐射设备的安全设施设计和维护跟进；
- Responsible for the internal and external filing and registration of radiation equipment in the laboratory.
  负责实验室内辐射设备的内外部备案登记工作。

School Clinic 校医务室：

- Responsible for regular special physical examinations of users of radiation equipment in schools, and make suggestions and follow up on problems found;
  负责校内辐射设备使用者的定期专项身体检查，并对发现问题提出建议和跟进；
- Archive medical records of personnel performing radiation equipment operations.
  对进行辐射设备操作的人员体检记录进行存档保存。

Campus Radiation Safety Expert Team 校内辐射安全管理技术专家组：

- It is composed of technical experts on radiation safety protection in schools and relevant laboratory professional and technical personnel, and is specifically responsible for safety management and technical guidance in radiation safety management.

  由校内辐射安全防护方面技术专家及有关实验室专业技术人员组成，具体负责辐射安全管理中的安全管理和技术指导工作。

4. Terminology 术语

Radioactive source: Radioactive material that is permanently sealed in a container or has a tight cladding and is solid, in addition to materials in the nuclear fuel cycle of research reactors and power reactors. Radioactive sources can be classified into alpha radioactive sources, beta radioactive sources, gamma radioactive sources, and neutron sources according to the type of radiation released.

放射源：是指除研究堆和动力堆核燃料循环范畴的材料以外，永久密封在容器中或者有严密包层并呈固态的放射性材料。放射源按所释放射线的类型可分放射源为α 放射源、β放射源、γ放射源和中子源等。

Sealed radioactive source: Radioactive material is sealed in a cladding that meets certain requirements.

密封放射源：放射性物质密封在符合一定要求的包壳中。

Unsealed radioactive source: refers to radioactive material that is not permanently sealed in the envelope or tightly consolidated in the cover.

非密封放射性源：是指非永久密封在包壳里或者紧密地固结在覆盖层里的放射性物质。

X-ray device: means X-ray machine, accelerator, neutron generator, and device containing radiation source.

射线装置：是指X线机、加速器、中子发生器以及含放射源的装置。

Radiological work: refers to work related to radioisotopes and radiation devices.

放射工作：是指与放射性同位素、射线装置有关的工作。

Radiological staff: refers to professional staff engaged in work related to radioisotopes and radiation devices.

放射工作人员：是指从事与放射性同位素、射线装置有关工作的职业性工作人员。

5. Process 流程

5.1. Radioisotope and radiation equipment 放射性同位素和辐射设备

5.1.1. Purchase and use management of radioisotopes and radiation equipment 放射性同位素和辐射设备的申购和使用管理

- When purchasing radioisotopes and radiation devices, they should go through the declaration and approval procedures with the competent environmental protection authority in accordance with the law, and only after obtaining the relevant permits or approval documents and submitting them to the EHS and laboratory and equipment management departments for filing, can they be implemented.

  购置放射性同位素和辐射装置时，应依法到环境保护主管部门办理申报及审批手续，待获得有关许可证或者批准文件，并报EHS和实验室及设备管理部门备案后，方可实施。

- After the purchased radioisotopes and radiation devices arrive, the radiation workers in the laboratory must go to the site to carry out careful inspection and verification. After confirming that they are safe, they should be immediately placed in a dedicated safe, warehouse or workplace, File with the competent environmental protection department, the school's EHS, and the laboratory and equipment management department within days to establish the corresponding technical files before you can handle asset registration and financial reimbursement.

  Radioactive sources must be stored and used in accordance with the requirements of double-locking, double-locking, receiving, using, and discarding account registration principles, and the flow of radioactive sources must be strictly monitored.

  购置的放射性同位素和辐射装置到货后，实验室内使用放射工作人员必须到现场进行认真检查、核对，确认安全无误后，应立即放入专用的保险柜、库房或工作场所内，并于

20日内到环境保护主管部门、校EHS和实验室及设备管理部门备案，建立相应的技术档案后，方可办理资产登记及财务报销。

放射性源保存、使用必须根据要求符合双人双锁、领用、使用和废弃台账登记原则，严格监控放射源流向。

- Each laboratory shall establish a radioisotope and radiation device ledger, which shall record the radionuclide's nuclide name, delivery time, activity, label, code, source and destination, and the name, model, type, type, use, Matters such as source and destination;

  Radioisotopes shall be stored separately, and shall not be stored together with flammable, explosive, corrosive materials, etc., and a designated person shall be responsible for storage.

  Establish and improve a registration system for the storage, receipt and consumption of radioisotopes, so that their accounts are consistent.

  各个实验室应建立放射性同位素与射线装置台账，记载放射性同位素的核素名称、出厂时间、活度、标号、编码、来源和去向，及射线装置的名称、型号、射线种类、类别、用途、来源和去向等事项；

  放射性同位素应当单独存放，不得与易燃、易爆、腐蚀性物品等一起存放，并指定专人负责保管。

  建立健全放射性同位素保管、领用和消耗的登记制度，做到账物相符。

- The radioisotope is raised and transported by designated radiation workers with qualifications for the post;

  It is strictly forbidden for other personnel to lift and transport radioisotopes.

  放射性同位素的提、运由指定的具有上岗资格的放射工作人员实行；

  其他人员严禁提、运放射性同位素。

- The transfer and transportation of radioisotopes must be properly packed, transferred and transported by special transportation means, and radioisotopes on campus must not be taken out of campus.

  放射性同位素的转移和运输，必须妥善包装,由专用运输工具转移、运输，校内放射性同位素不得带出校园。

- Relevant units on campus (such as laboratories and EHS offices) should be equipped with protective equipment and monitoring equipment that are compatible with the type and level of radiation, including: personal dose measurement alarms, radiation monitoring and other equipment

  The school's EHS office should be equipped with a surface contamination monitor that has the ability to monitor the leakage of unsealed radioactive materials.

  校内相关单位（如实验室、EHS办公室）应配备与辐射类型和辐射水平相适应的防护用品和监测仪器，包括：个人剂量测量报警、辐射监测等仪器；

  学校EHS办公室应配备表面污染监测仪，对非密封放射性物质泄露有监测能力。

- Establish and improve the safety inspection system, conduct regular safety inspections of the radioisotopes, radiation devices and radiation workplaces used in various laboratories, and keep records;

  In the process of carrying out related work on radioisotopes and radiation devices, it is necessary to strictly follow the operating procedures and do a good job of safety protection.

  建立健全安全检查制度，定期对各实验室使用的放射性同位素、射线装置和辐射工作场所进行安全检查，并做好记录；

  在开展放射性同位素、射线装置相关工作的过程中须严格按照操作规程进行，做好安全保护工作。

- Each laboratory using radiation equipment should prepare an annual assessment report on the safety and protection status of radioisotopes and radiation devices, and submit it to the school's EHS office in December each year.

  各个使用辐射设备的实验室应当编写放射性同位素与射线装置安全和防护状况年度评估报告，于每年12月提交至校EHS办公室。

- The EHS summarizes the laboratory information related to radiation equipment in the school and summarizes the annual evaluation report.

  EHS汇总校内相关涉及辐射设备的实验室信息，并汇总年度评估报告。

  Annual assessment report should include 年度评估报告应当包括：

1. Radioisotope and radiation device ledger 放射性同位素与射线装置台账、
2. Operation and maintenance of radiation safety and protection facilities 辐射安全和防护设施的运行与维护、
3. Establishment and implementation of radiation safety and protection systems and measures 辐射安全和防护制度及措施的建立和落实、
4. Accident and emergency 事故和应急、
5. And other aspects of file management 以及档案管理等方面的内容。

5.1.2. Disposal of radioisotopes and radiation devices 放射性同位素和射线装置报废处理

- Relevant laboratories intending to dispose of used radioactive sources shall, in accordance with the agreement for returning used radioactive sources signed at the time of purchase, return the used radioactive sources to the production unit or return to the original exporter within 3 months after the radioactive source is idle or abandoned
  If it is really impossible to return it to the production unit or the original exporter, it shall be delivered to the correspondingly qualified radioactive waste centralized storage and disposal unit. It is forbidden to discard or provide it to non-disposal qualified companies and individuals for processing.
  相关实验室拟处置废旧放射源，应按照购置时签订的废旧放射源返回协议约定，在放射源闲置或者废弃后3个月内将废旧放射源交回生产单位或者返回原出口方；
  确实无法交回生产单位或者返回原出口方的，应送交有相应资质的放射性废物集中贮存、处置单位，禁止随意丢弃或提供给无处置资质公司及个人进行处理。
- The unit that holds the radioactive source returns the used radioactive source to the production unit, returns to the original exporter, or sends it to the centralized storage unit of radioactive waste for storage, which shall be filed with the local competent environmental protection department within 20 days from the completion of the activity and reported EHS and laboratory and equipment asset management department on file.

持有放射源的单位将废旧放射源交回生产单位、返回原出口方或者送交放射性废物集中贮存单位贮存的，应当在该活动完成之日起20日内向当地环境保护主管部门备案，并报校内EHS和实验室及设备资产管理部门备案。

- Before the completion of the decommissioning of the radioactive device on campus, report it to the EHS and the laboratory and equipment asset management department for the record.
  校内放射性装置退役申报完成前，报EHS和实验室及设备资产管理部门备案。
- The unit that intends to dispose of the radiation device shall, after termination of the operation of the radiation device that produces radioactive contamination, report to the local environmental protection administrative department for approval and implement the decommissioning according to law.
  拟对射线装置进行报废处置的单位，在产生放射性污染的射线装置终止运行后，应当按要求报当地环境保护行政主管部门审批通过后依法实施退役。
- The radioisotopes and radiation devices to be scrapped must be properly kept and must not be disposed of without authorization. Random stacking, burying, burning and disposal are strictly prohibited.
  待报废的放射性同位素和射线装置必须妥善保管，不得擅自处理。严禁随意堆放、掩埋、焚烧和丢弃。

5.1.3. Radioactive waste management 放射性废弃物管理

- Radioactive waste must be processed by a radioactive waste treatment company approved by the state with corresponding treatment qualifications;
  放射性的废弃物必须由国家批准具备相应处理资质的放射性废弃物处理公司进行处理；
- Prior to outsourced processing, special waste temporary storage equipment must be used for storage according to the characteristics of the waste, and temporarily stored in the used laboratory, waiting for externally qualified companies to collect it from the school.
  在委外进行处理前，必须根据废弃物的特性使用专用的废弃物暂存设备进行保存，并暂存在使用的实验室内，等待外部符合处理资质的公司到学校收取。

5.2. Radiological staff management 放射工作人员管理

- Before the whole school's radiation workers take up their posts, they must undergo medical examinations and receive radiation protection knowledge training and legal education. They must pass the examination and obtain the "radiation work safety protection training certificate" before engaging in radiation work.

  Those who have obtained the "Certificate of Qualification for Radiation Work Safety Protection Training" must be retrained every four years.

  全校的放射工作人员上岗前，必须进行健康检查和接受放射防护知识培训和法规教育，考核合格并获得《辐射工作安全防护培训合格证》后方可从事放射工作。

  取得《辐射工作安全防护培训合格证)》人员，每四年须接受一次再培训。

- According to relevant national regulations, radiation workers must wear personal dosimeters and perform personal dose testing (once every 3 months) during work

  The discipline is responsible for the organization and implementation of individual dose monitoring in the various laboratories of the discipline, and the establishment of individual dose archives, which are regularly reported to the laboratory and equipment management department and EHS for the record.

  按国家有关规定，放射工作人员在工作期间，必须佩带个人剂量计，并进行个人剂量检测(每3个月一次)；

  学科负责组织实施学科各个实验室个人剂量监测工作，并建立个人剂量档案，定期报实验室及设备管理部门和EHS备案。

- The laboratory and equipment management department organizes annual occupational health inspections for established radiation workers in accordance with the relevant national occupational hazard monitoring requirements, establishes occupational health inspection archives, and performs related archives management.

实验室及设备管理部门对上岗的放射工作人员根据国家相关职业危害因素监测要求组织每年职业健康检查，建立职业健康检查档案，并做好相关的档案管理工作。

- Workers who have not undergone occupational health examinations, workers with occupational contraindications, juvenile workers, or female workers during pregnancy or lactation may not be assigned to radiation work.
  不得安排未经职业健康检查的工作人员、有职业禁忌的职工、未成年工或者孕期、哺乳期女职工从事放射工作。
- No temporary personnel may be hired for radiological work. Temporary or short-term personnel participating in experimental work related to radioisotopes and radiation devices must undergo necessary and standardized safety and operation training before engaging in radiological work, and can only work after passing the assessment.
  不得雇佣临时人员从事放射工作。临时或短期参加与放射性同位素、射线装置有关实验工作的人员在从事放射工作前，必须经过必要的、规范的安全和操作培训，考核合格后方可上岗作业。
- As for the operators of radioactive equipment, the protection of radiation workers shall be implemented in accordance with relevant state regulations.
  对于放射性设备操作人员，应按照国家有关规定执行放射工作人员保障待遇。
- Staff who are found to have occupational contraindications or have health injuries related to the occupation they are engaged in shall be promptly removed from their original positions and properly placed.
  发现有职业禁忌症或者有与所从事职业相关的健康损伤的工作人员，应及时调离原工作岗位，并妥善安置。
- All students who use radioisotopes and radiation devices in their experiments must have full-time laboratory personnel responsible for their collection and storage. During the experimental operation, students should be instructed by the instructor in person at the scene. Individual work is forbidden, and a record of each use is required.

凡学生实验使用放射性同位素和射线装置，必须有实验室专职人员负责领用、保管。学生实验操作时，要有指导教师亲临现场指导，禁止单独作业，且需作好每次使用情况的记录。

6.0 Annex 附件

None 无